

NOTES

NOTEWORTHY VASCULAR PLANTS OF GARZA COUNTY, TEXAS.—Garza County is located in the southern portion of the Texas Panhandle. It encompasses an area of approximately 914 square miles and can be divided into four distinct physiographic types; high plains, cap rock escarpment, rolling plains, and sand hills.

Approximately one-fourth of its area is of the high plains type, which is clearly delimited by an escarpment, and characterized by a flat, featureless topography. The region is subjected to intense cultivation. Numerous shallow "playa" lakes of recent or Cenozoic origin occur in this type. These lakes are thought to have been formed by the dissolution of subterranean strata allowing the surface to sink. The playas vary in width from a few feet to approximately a mile in diameter and from a few inches to several feet in depth.

The "cap rock" area is an erosion-formed escarpment forming a physiographic boundary between the rolling plains and the high plains. It is topped by a residual stratum of limestone or sandstone. The escarpment area is dominated by mesquite-juniper association.

Below the escarpment are the rolling plains. These range in elevation from 2100 to 2800 feet. Jurassic red bed depositions form the primary soil type in this area.

Deep sand deposits occur as hills in the northeastern corner of the county.

The county is dissected by the erosion caused by numerous tributaries of the Brazos river. Isolated mesic areas are found in sheltered canyons of the cap rock escarpment.

Garza county has an average annual rainfall of 18.6 inches, a growing season of 216 days, a July mean maximum temperature of 95 degrees F. and January mean minimum temperature of 27 degrees F. with a record high of 103 degrees F. and a record low of 0 degrees F.

This investigation was initiated in April of 1965. One of its objectives was to determine to what extent, if any, the vegetation of the Chihuahuan Desert had successfully invaded Garza County. This paper represents a progress report following two years' investigation. An examination of the 365 taxa collected and identified by the author to date, indicates that there are a number of species occurring in the county which normally reach their greatest development in the regions of the Chihuahuan Desert.

The following is a list of range extensions recorded to date. The specimens cited are to be deposited in the herbarium of Texas Technological College, Lubbock, Texas, and duplicates of the author's collection will be deposited in the herbarium of Southern Methodist University, Dallas, Texas. Unless otherwise indicated the collection numbers cited are those of the author.

Peganum harmala L. (24 July 1965, 687. 27 Sept. 1965, 886. 7 May 1966, Rollo 148. 28 April 1961, Rowell 8041.) Rolling plains area. V. L. Cory (Field and Laboratory 17: 20-23, 1949) cites this species from Ward and Reeves counties. This represents a range extension of approximately 170 miles north.

Epipactis gigantea Dougl. ex Hook. (14 July 1965, 673. 19 April 1966, 1053. 16 May 1966, 1121. 22 May 1966, 1150.) Mesic area of Cooper's Canyon. D. S. Correll (Additions to the Orchids of Texas: 169, 1947) cites collections in Kendall and Presidio Counties. These counties are approximately 400 miles southeast and 220 miles southwest, respectively, from Garza county. Collections are cited for Wise County which is about 300 miles east of Garza county. (The Flora of Texas, 1944 Vol. 3, part 3.)

Nicotiana trigonophylla Dunal (20 June 1965, 619.) Breaks of the cap rock escarpment. T. H. Goodspeed in "The Genus *Nicotiana*" (Chronica Botanica 16: 1-536, 1954.) cites this plant from the Texas Trans-Pecos area and New Mexico, approximately 200 miles southwest of Garza County.

Isocoma wrightii (Gray) Greene (*I. heterophylla* (Gray) Greene, *Haplopappus heterophyllus* (Gray) Blake, *H. pluriflorus* of Texas authors.) (4 July 1965, 639.) Cap rock breaks below escarpment near southern edge of Garza County. Wooten and Standley (The Flora of New Mexico; 665-666, 1915.) cite this species as ranging from West Texas to southern New Mexico. F. W. Gould (Texas Plants- a Checklist and Ecological Summary, June 1962.) lists this species from the Trans-Pecos area of Texas only.

Zephyranthes longifolia Hemsl. (14 June 1965, 605. 21 June 1966, 1232. 21 June 1966, 1233.) Collected on the high plains. Fred B. Jones of Corpus Christi, in a private communication (8 April 1966) stated the known range of this plant was from Arizona to far West Texas and southward into Central Mexico, and that the author's collection may be the farthest north, at least in Texas.

Verbena halei Small (9 May 1965, 453. 18 April 1966, 1049. 12 May 1966, 1101.) Low moist areas of rolling plains. H. N. Moldenke (The Flora of Texas, 3(1):21-23, 1942) cites collections from Throckmorton, Callahan, and Brewster Counties, the nearest of these being approximately 130 miles east of Garza County.

Atriplex confertifolia (Torr. & Frem.) S. Wats. (13 August 1965, 839. 6 September 1965, 857.) Collected in cap rock breaks near the southern border of Garza County. P. C. Standley (North American Flora, 21(1): 1-93, 1916) cites dry plains and hillsides—North Dakota to Chihuahua, California, and eastern Oregon. Wooten and Standley (The Flora of New Mexico; 201-205, 1915) cited the dry plains and lower hills of the upper Sonoran zone as the range of this plant. Gould does not list this species.

Krameria glandulosa Rose and Painter (2 May 1965, 417.) Limestone soils of the cap rock escarpment. B. L. Turner (Legumes of Texas, 80, 1959) indicated the range of this plant extending northward from the

Trans-Pecos only into Loving County, an extension of about 155 miles northeast.

Desmanthus obtusus Wats. (3 June 1965, 532. 6 July 1966, 1250.) Collected in the rolling plains. B. L. Turner (Legumes of Texas, 57, 1959) cited this plant from Howard, Martin and Mitchell Counties, about 80-100 miles south of Garza County.

The following plants are range extensions according to Gould's "Texas Plants—a Checklist and Ecological Summary."

Parthenium lyratum Gray (7 November 1965, 958.) Collected in the margin of a playa lake. Listed by Gould up to Sterling County, 120 miles south of Garza County.

Viguiera stenoloba Blake (12 July 1965, 650.) Collected in breaks of cap rock escarpment. Listed from the Trans-Pecos area by Gould.

Cressa truxillensis H.B.K. (5 June 1965, 585. 9 June 1966, 1185.) Collected in rolling plains and listed from Trans-Pecos by Gould.—Charles R. Hutchins, Department of Biology, Texas Technological College, Lubbock, Texas 79409.

POLIANTHES ROSEI SHINNERS, NOM. NOV. (AGAVACEAE).—Based on *Manfreda elongata* Rose, Contrib. U.S. Nat. Herb. 8: 21. 1903. *Polianthes elongata* (Rose) Shinners, Sida 3: 337. 1967. Not *P. elongata* Rose, Proc. U.S. Nat. Mus. 29: 437. 1905. *Agave gracilis* Berger, Die Agaven p. 33. 1915. Not *Polyanthes gracilis* Link, Enum. Pl. Hort. Reg. Bot. Berol. Altera 1: 330. 1821. On filing a new issue of the Gray Herbarium Card Index, I found a previously missed entry for Rose's 1905 name. Our older issues are photocopies on thin paper, two of which must have been stuck together when I checked the Index in preparing my *Polianthes* paper. Berger's substitute name is also preoccupied under *Polianthes*, making a new epithet necessary.—Lloyd H. Shinners.

BURMANNIA BIFLORA (BURMANNIACEAE) AND BOWLESIA INCANA (UMBELLIFERAE) IN OUACHITA PARISH, LOUISIANA.—*Burmannia biflora* L. is relatively abundant in swampy woods at the edge of Tanyard Brake southeast of Luna (Thomas & Jones 770, 13 Oct. 1966). Louisiana is within the Manual range of the species, but these are the first specimens from the state that the author has seen. Jonker's "A Monograph of the Burmanniaceae" (Meded. Bot. Mus. & Herb. Utrecht No. 51, 1938, p. 80) gives New Orleans as the only definite locality, listing several other collections as "without locality." Those credited to Torrey, Short and Gray must have been received from others, since these men did not collect in Louisiana; that of Drummond must have come from southeastern Louisiana, the only portion of the state in which he collected; that of Hale may have come from Alexandria. In any case, the Ouachita Parish record is a notable inland extension of range.